UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,617	03/31/2004	Falk Lehmann	13909-154001 / 2003P00540	3815

32864 7590 10/03/2006

FISH & RICHARDSON, P.C.
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,617	LEHMANN ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,13-25,33-41,44,47-49,52-56 and 59-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6-12, 26-32, 42-43, 45-46, 50-51 and 57-58* is/are allowed.

6)☒ Claim(s) *1-5,13-25,33-41,44,47-49,52-56 and 59-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/03/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Action is responsive to Applicant's Application filed March 31, 2004. Please note Claims 1-5, 13-25, 33-41, 44, 47-49, 52-55, 56 and 59-63 are pending and claims 6-12, 26-32, 42-43, 45-46, 50-51 and 57-58 are allowed.

Priority

2. Applicant's claim for the benefit of prior applications: Nos. 60/524,859, filed November 26, 2003; 60/524,857, filed November 26, 2003; and 60/524,858, filed November 26, 2003, under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Information Disclosure Statement

3. Information Disclosure Statements filed November 3, 2004 is considered and corresponding PTO-1449 is electronically signed and attached.

Drawings

4. The drawings, filed March 31, 2004, are considered in compliance with 37 CFR 1.81 and accepted.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have

the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.1. Claims 1-5, 13-25, 33-41, 44, 47-49, 52-55, 56 and 59-63 are rejected under 35 U.S.C. §102(e) as anticipated by Chen et al. (U.S. Patent Application 2004/0103371, published 12/09/2002, hereafter "Chen").

As per claim 1, Chen teaches "A method for servicing a request for information from a device with limited network, memory, and display resources" (See Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device), the method comprising:

"receiving a request for a page of information from a client device" (See Page 2, [0025] where a request for a page is relayed to a provider);

"retrieving the requested page" (See Page 3, [0025] where a process of analyzing a requested page starts which implies the page has been retrieved);

"identifying points within the page at which the page may be divided into sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"separating the page at the identified points into multiple sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"determining if each of the multiple sub-pages may be used by the client device" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data

are selected as sub-pages in according to screen size of the small form factor device which browses the page);

"linking the multiple sub-pages" (See Page 7, [0072] where split sub-pages are linked by next/back hyperlinks or a double link list); and

"transferring individually the multiple sub-pages to the client device" (See Page 3, [0027] where index page of sub-pages of requested page is transmitted and received by requester and specific page is transmitted and received by requester upon selection).

As per claim 40, Chen teaches "A method for fragmenting a page for a device that is unable to receive or display the page as a whole" (See Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device), the method comprising:

"identifying a page that is to be sent to a client device" (See Page 3, [0025] where a process of analyzing a requested page starts which implies the requested page has been identified);

"dividing the page into atomic pieces" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"combining the atomic pieces to construct multiple sub-pages" (See Page 7, [0072] where split sub-pages are linked by next/back hyperlinks or a double link list);

"estimating a weight of each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page);

"comparing the weight of each of the multiple sub-pages to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and

"transferring individually the multiple sub-pages to the client device" (See Page 3, [0027] where index page of sub-pages of requested page is transmitted and received by requester and specific page is transmitted and received by requester upon selection).

As per claim 48, Chen teaches "A method for fragmenting a page for a device that is unable to receive or display the page as a whole" (See Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device), the method comprising:

"identifying a page that is to be sent to a client device" (See Page 3, [0025] where a process of analyzing a requested page starts which implies the requested page has been identified);

"dividing the page into atomic pieces" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"combining the atomic pieces to construct multiple sub-pages" (See Page 7, [0072] where split sub-pages are linked by next/back hyperlinks or a double link list);

"translating each of the multiple sub-pages into a language used to display the multiple sub-pages" (See Page 1, [0007] where web content is translated for a small form factor device to view and the translation analyzes original page, partitions the content of page

into sub-pages, learns user viewing habits or user inputted preference and displays sub-pages accordingly);

"calculating a weight of each of the translated sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page);

"comparing the weight of each of the translated sub-pages to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and

"transferring individually the translated sub-pages to the client device" (See Page 3, [0027] where index page of sub-pages of requested page is transmitted and received by requester and specific page is transmitted and received by requester upon selection).

As per claim 53, Chen teaches "A method for fragmenting a page for a device that is unable to receive or display the page as a whole" (See Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device), the method comprising:

"identifying a page that is to be sent to a client device" (See Page 3, [0025] where a process of analyzing a requested page starts which implies the requested page has been identified);

"identifying fragmentation points within the page at which the page may be divided into sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"dividing the page at at least one of the identified fragmentation points to create multiple sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"estimating a weight of each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page);

"comparing the weight of each of the multiple sub-pages to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and

"transferring individually the multiple sub-pages to the client device" (See Page 3, [0027] where index page of sub-pages of requested page is transmitted and received by requester and specific page is transmitted and received by requester upon selection).

As per claim 60, Chen teaches "A method for fragmenting a page for a device that is unable to receive or display the page as a whole" (See Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device), the method comprising:

"identifying a page that is to be sent to a client device" (See Page 3, [0025] where a process of analyzing a requested page starts which implies the requested page has been identified);

"identifying fragmentation points within the page at which the page may be divided into sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"dividing the page at **at least one of** the identified fragmentation points to create multiple sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly);

"translating each of the multiple sub-pages into a language used to display the multiple sub-pages on the client device" (See Page 1, [0007] where web content is translated for a small form factor device to view and the translation analyzes original page, partitions the content of page into sub-pages, learns user viewing habits or user inputted preference and displays sub-pages accordingly);

"calculating a weight of each of the translated sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page);

"comparing the weight of each of the translated sub-pages to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and

"transferring individually the translated sub-pages to the client device for display" (See Page 3, [0027] where index page of sub-pages of requested page is transmitted and received by requester and specific page is transmitted and received by requester upon selection).

As per claim 2, Chen teaches the method of claim 1 wherein separating the page at the identified points comprises:

"selecting at least one of the identified points" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly); and

"dividing the page at the at least one selected point to create multiple sub-pages" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 3, Chen teaches the method of claim 1 wherein:

"the points within the page at which the page may be divided into sub-pages define atomic pieces of the page that may not be further divided" (See Page 3, [0025] where low level structure of visual boundaries extraction is performed sufficient for clustering of the divided segments); and

"separating the page at the identified points into multiple sub-pages comprises: dividing the page into atomic pieces at the identified points" (See Page 3, [0025] where web

page is segmented web page is annotated for an image index page and sub-pages thereof); and

"combining the atomic pieces to construct the multiple sub-pages" (See Page 3, [0025] where web page is segmented web page is annotated for an image index page and sub-pages thereof).

As per claim 4, Chen teaches "The method of claim 3 wherein the identified points are defined by elements of a language in which the information is represented, and wherein the elements define the atomic pieces of the page" (See Page 1, [0007] where markup language tag selection rules is utilized to extract high level structure and low level structure is extracted by visual boundary in which visual units of the structure are provided by the clustering of the leaf markup language tags).

As per claim 5, Chen teaches the method of claim 3 wherein dividing the page into atomic pieces at the identified points comprises:

"identifying atomic pieces of the page" (See Page 3, [0025] where low level structure of visual boundaries extraction is performed sufficient for clustering of the divided segments);

"identifying structures within the page that include the atomic pieces" (See Page 3, [0025]-[0026] where low level structure of web page is extracted by visual boundary detection);

"coupling descriptions of the structures to the atomic pieces" (See Page 3, [0025]-[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages); and

"adding the coupling of the atomic pieces and the corresponding descriptions of the structures to a set of atomic pieces of the page" (See Page 3, [0025] -[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages).

As per claim 13, Chen teaches the method of claim 1 wherein determining if each of the multiple sub-pages may be used by the client device comprises:

"translating each of the multiple sub-pages into a language used to display the multiple sub-pages" (See Page 1, [0007] where web content is translated for a small form factor device to view and the translation analyzes original page, partitions the content of page into sub-pages, learns user viewing habits or user inputted preference and displays sub-pages accordingly);

"calculating a weight of each of the multiple sub-pages after translation" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and

"comparing each of the calculated weights to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are

selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 14, Chen teaches "The method of claim 13 wherein calculating the weight of each of the multiple sub-pages after translation comprises calculating a size in memory of each of the multiple sub-pages after translation" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 15, Chen teaches "The method of claim 13 wherein calculating the weight of each of the multiple sub-pages after translation comprises calculating a display space used by each of the multiple sub-pages after translation" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 16, Chen teaches "The method of claim 13 wherein calculating the weight of each of the multiple sub-pages after translation comprises calculating a network data unit size required for each of the multiple sub-pages after translation" (See Page 1, [0004] where web page can be adapted by techniques that modify the web

content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 17, Chen teaches "The method of claim 13 wherein calculating the weight of each of the multiple sub-pages after translation comprises calculating a network latency for each of the multiple sub-pages after translation" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 18, Chen teaches the method of claim 13 wherein:
"calculating the weight of each of the multiple sub-pages after translation comprises identifying input devices required by each of the multiple sub-pages after translation" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and
"comparing each of the calculated weights to a maximum allowable weight comprises determining if the input devices required by each of the multiple sub-pages after translation are available on the client device" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 19, Chen teaches the method of claim 1 wherein determining if each of the multiple sub-pages may be used by the client device comprises:
"estimating a weight of each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page); and
"comparing each of the estimated weights to a maximum allowable weight" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page);

As per claim 20, Chen teaches "The method of claim 19 wherein estimating the weight of each of the multiple sub-pages comprises estimating a size in memory of each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to memory size associated screen size of the small form factor device which browses the page).

As per claim 21, Chen teaches "The method of claim 19 wherein estimating the weight of each of the multiple sub-pages comprises estimating a display space used by each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 22, Chen teaches "The method of claim 19 wherein estimating the weight of each of the multiple sub-pages comprises estimating a network data unit size required for each of the multiple sub-pages" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 23, Chen teaches "The method of claim 19 wherein estimating the weight of each of the multiple sub-pages comprises estimating a network latency for each of the multiple sub-pages" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 24, Chen teaches the method of claim 19 wherein:
"estimating the weight of each of the multiple sub-pages comprises estimating input devices required by each of the multiple sub-pages" (See Page 3, [0027]-[0028] where sub-pages are received by user's input device and further requests for sub-pages are made via input device); and
"comparing each of the estimated weights to a maximum allowable weight comprises determining if the input devices required by each of the multiple sub-pages are available

on the client device" (See Page 3, [0027]-[0028] where sub-pages are received by user's input device and further requests for sub-pages are made via input device).

As per claim 25, Chen teaches "The method of claim 19 further comprising enabling estimation of the weight each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 33, Chen teaches "The method of claim 1 wherein identifying points within the page at which the page may be divided into multiple sub-pages includes inserting fragmentation points into the page at which the page may be divided into multiple sub-pages" (See Page 5, [0053] where blanks are inserted between two shapes).

As per claim 34, Chen teaches the method of claim 33 wherein:
"the fragmentation points include a level attribute" (See Page 3, [0029] and Page 5, [0053] where a web page is analyzed into a logical region hierarchy); and
"the page is divided at fragmentation points with lower values for the level attribute before the page is divided at fragmentation points with higher values for the level attribute" (See Page 3, [0029] and Page 5, [0053] where fragments of a web page are further divided by a transition to a column form).

As per claim 35, Chen teaches the method of claim 1 wherein identifying points within the page at which the page may be divided into multiple sub-pages comprises:
"identifying an initial fragmentation point within the page" (See Page 3, [0029] and Page 5, [0053] where fragments of a web page are identified and further divided by a transition to a column form);
"identifying a fragment size associated with the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided in according to document tag divider); and
"creating additional fragmentation points at integer multiples of the fragment size from the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided into parts and further into blocks).

As per claim 36, Chen teaches "The method of claim 1 wherein identifying points within the page at which the page may be divided into sub-pages comprises inserting markers around atomic pieces of the page" (See Page 5, [0053] where blanks are inserted between two shapes).

As per claim 37, Chen teaches "The method of claim 1 further comprising identifying network, memory, and display requirements of the client device for use in determining if each of the multiple sub-pages may be used by the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet

network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 38, Chen teaches the method of claim 37 wherein identifying network, memory, and display requirements of the client device comprises:
"receiving an identification of the client device" (See Fig. 2, elements 204 and 230 where client device is identified for sending sub-pages); and
"retrieving an indication of the network, memory, and display requirements from a database based on the received identification" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 39, Chen teaches "The method of claim 37 wherein identifying network, memory, and display requirements of the client device comprises receiving an indication of network, memory, and display requirements of the client device from the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual

boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 41, Chen teaches the method of claim 40 wherein dividing the page into the atomic pieces comprises:

"identifying atomic pieces of the page" (See Page 3, [0025] where low level structure of visual boundaries extraction is performed sufficient for clustering of the divided segments);

"identifying structures within the page that include the atomic pieces" (See Page 3, [0025]-[0026] where low level structure of web page is extracted by visual boundary detection);

"coupling descriptions of the structures to the atomic pieces" (See Page 3, [0025]-[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages); and

"adding the coupling of the atomic pieces and the corresponding descriptions of the structures to a set of atomic pieces of the page" (See Page 3, [0025] -[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages).

As per claim 44, Chen teaches "The method of claim 40 further comprising enabling estimation of the weight of each of the multiple sub-pages" (See Page 2, [0019] where

web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 47, Chen teaches "The method of claim 40 further comprising identifying the maximum allowable weight based on network, memory, and display requirements of the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 49, Chen teaches the method of claim 48 wherein dividing the page into the atomic pieces comprises:

"identifying atomic pieces of the page" (See Page 3, [0025] where low level structure of visual boundaries extraction is performed sufficient for clustering of the divided segments);

"identifying structures within the page that include the atomic pieces" (See Page 3, [0025]-[0026] where low level structure of web page is extracted by visual boundary detection);

"coupling descriptions of the structures to the atomic pieces" (See Page 3, [0025]-[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages); and

"adding the coupling of the atomic pieces and the corresponding descriptions of the structures to a set of atomic pieces of the page" (See Page 3, [0025] -[0026] where sub-pages are annotated to create image index page in which thumbnails view is marked with sub-pages).

As per claim 52, Chen teaches "The method of claim 48 further comprising identifying the maximum allowable weight based on network, memory, and display requirements of the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 54, Chen teaches the method of claim 53 wherein:

"the fragmentation points include a level attribute" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly); and

"dividing the page at at least one of the identified fragmentation points comprises dividing the page at fragmentation points with a lower value for the level attribute before

dividing the page at fragmentation points with a higher value for the level attribute" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 55, Chen teaches the method of claim 53 wherein identifying fragmentation points within the page comprises:
"identifying an initial fragmentation point within the page" (See Page 3, [0029] and Page 5, [0053] where fragments of a web page are identified and further divided by a transition to a column form);
"identifying a fragment size associated with the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided in according to document tag divider); and
"creating additional fragmentation points at integer multiples of the fragment size from the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided into parts and further into blocks).

As per claim 56, Chen teaches "The method of claim 53 further comprising enabling estimation of the weight of each of the multiple sub-pages" (See Page 2, [0019] where web page is divided into blocks and appropriate blocks of data are selected as sub-pages in according to screen size of the small form factor device which browses the page).

As per claim 59, Chen teaches "The method of claim 53 further comprising identifying the maximum allowable weight based on network, memory, and display requirements of the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

As per claim 61, Chen teaches the method of claim 60 wherein:
"the fragmentation points include a level attribute" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly); and
"dividing the page at at least one of the identified fragmentation points comprises dividing the page at a fragmentation point with a lower value for the level attribute before dividing the page at a fragmentation point with a higher value for the level attribute" (See Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly).

As per claim 62, Chen teaches the method of claim 60 wherein identifying fragmentation points within the page comprises:

"identifying an initial fragmentation point within the page" (See Page 3, [0029] and Page 5, [0053] where fragments of a web page are identified and further divided by a transition to a column form);

"identifying a fragment size associated with the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided in according to document tag divider); and

"creating additional fragmentation points at integer multiples of the fragment size from the initial fragmentation point" (See Page 3, [0029] and Page 5, [0053] where a segment is further divided into parts and further into blocks).

As per claim 63, Chen teaches "The method of claim 60 further comprising identifying the maximum allowable weight based on network, memory, and display requirements of the client device" (See Page 1, [0004] where web page can be adapted by techniques that modify the web content to meet network capabilities and at Page 3, [0025] where the visual boundaries of a page is detected and page is segmented into sub-pages accordingly and at Page 1, [0007] where a large web page is partitioned into small sub-pages and displayed on small form factor device of a request device).

Allowable Subject Matter

6. Claims 6-12, 26-32, 42-43, 45-46, 50-51 and 57-58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Reason for Allowance

7. In the Examiner's Office Action for non-Final Rejection of claims 1-5, 13-25, 33-41, 44, 47-49, 52-55, 56 and 59-63 as previously described, the 35 U.S.C. 35 U.S.C. § 102, rejections was based on a reference of Chen et al.: "SMALL FORM FACTOR WEB BROWSING", U.S. Patent Application 2004/0103371, published 12/09/2002, hereafter "Chen".

Concerning the allowed claims, the subject matter of claims 6, 42 and 50 is a combination of the following elements:

"**creating a sub-page of the multiple sub-pages, the sub-page having a weight that is initially zero;**

identifying a single atomic piece;

determining where in the sub-page the single atomic piece may be added;

determining whether the single atomic piece may be added to the sub-page;

adding the single atomic piece to the sub-page; and

updating the weight of the sub-page based on the addition of the single atomic piece to the sub-page"; and

the subject matter of claims 26, 45 and 57 is a combination of elements of:

"**generating random pieces of information of varying sizes;**

calculating a weight of each of the random pieces of information;

translating the random pieces of information into a language used to display information on the client device;

calculating a weight of each of the random pieces of information after translation; and

performing a linear regression between the calculated weights of the random pieces of information and the corresponding calculated weights of the random pieces of information after translation".

Note the subject matter claimed by 6, 42 and 50 is dependent on the subject matter described in their respective base claims (1,3), 40 and 48, respectively; and the subject matter claimed by 26, 45 and 57 is dependent on the subject matter described in their respective base claims (1, 19 and 25), 40 and 53, respectively.

Searches on prior art, as further described below, conclude the above Chen reference the closest art. The Chen reference neither teaches an evaluation of atomic piece for adding the piece to a position in a sub-page and updating the sub-page; nor teaches generating varying sizes of random pieces, calculating weight before and after translation and performing a linear regression of the weights.

After a thorough search for the prior art conducted on EAST database and domains (NPL-ACM, Google, NPL-IEEE) and a detailed examination performed on the search results, the Examiner is persuaded that the prior art searched and made of record (for claims 1-5, 13-25, 33-41, 44, 47-49, 52-55, 56 and 59-63 rejection) does not teach the above described subject matter as described in each of the claims 6, 26, 42, 45, 50 and 57, respectively.

The dependent claim(s) in the groups (7-12), (27-32), 43, 46, 51 and 58 depending claims 6, 26, 42, 45, 50 and 57, respectively, also distinct from the prior art for the same reason.

Conclusion

8. The prior art made of record

A. U.S. Patent Application 2004/0103371

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. U.S. Patent Application 2005/0188004

C. U.S. Patent Application 2004/0073867

D. U.S. Patent Application 2002/0078165

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu

Patent Examiner, Art Unit 2167

September 27, 2006